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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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A. Burgess Lowe 101 East Maple Street North Canton, OH 44720				
			EXAMINER KARLS, SHAY LYNN	
			ART UNIT 1744	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/644,181	Applicant(s) KA NAM, PETER HO	
	Examiner Shay L. Karls	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Gomez (USPN 2670485).

Gomez teaches a sweeper comprising a front housing (60) and a rotating brush (24) secured to the housing having tangentially extending bristles adapted to engage a surface at an oblique angle (every bristle that touches the surface, except for the bristles directly perpendicular to the surface, engage the surface at an oblique angle). There is a frame (40) secured to a lower portion of the housing. There is a height adjustment column (66) rising from the rear of the frame. There is a dirt receptacle (30) removably located on the frame.

With regards to claim 2, there is a notch (64) defined in the rear of the dirt receptacle for extending around the column.

With regards to claim 3, there is an adjustable wheel assembly (68) positioned within the column.

With regards to claim 4, there is a rotary knob located on the top of the column (not labeled but shown in figure 2 between reference numbers 62 and 66).

With regards to claim 5, there is a cam (threading on 66), which moves the wheel up and down relative to the frame as the knob is rotated.

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With regards to claims 6 and 7, when the wheel is moved downwardly the force of the brush is increased and when the wheel is moved upwardly the force of the brush is decreased.

Claims 1, 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Parker et al. (USPN 2268059).

Parker teaches a sweeper comprising a front housing (12) and a rotating brush (17) secured to the housing having tangentially extending bristles adapted to engage a surface at an oblique angle (every bristle that touches the surface, except for the bristles directly perpendicular to the surface, engage the surface at an oblique angle). There is a frame (28) secured to a lower portion of the housing. There is a height adjustment column (51a) rising from the rear of the frame. There is a dirt receptacle (14) removably located on the frame.

With regards to claim 3, there is an adjustable wheel assembly (51) positioned within the column.

With regards to claim 4, there is a rotary knob located on the top of the column (not labeled but shown in figure 3 as reference number 51a).

With regards to claim 5, there is a cam (threading on 51a), which moves the wheel up and down relative to the frame as the knob is rotated.

With regards to claims 6 and 7, when the wheel is moved downwardly the force of the brush is increased and when the wheel is moved upwardly the force of the brush is decreased.

Claims 1, 3-7, 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Pätzold et al. (USPN 4502173).

Pätzold teaches a sweeper comprising a front housing (11) and a rotating brush (14) secured to the housing having tangentially extending bristles adapted to engage a surface at an

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oblique angle (every bristle that touches the surface, except for the bristles directly perpendicular to the surface, engage the surface at an oblique angle). There is a frame (not labeled, see figure 4 and 5 wherein the frame is shown by the cross hatched area below the front housing) secured to a lower portion of the housing. There is a height adjustment column (57) rising from the rear of the frame. There is a dirt receptacle (68) removably located on the frame.

With regards to claim 3, there is an adjustable wheel assembly (17) positioned within the column.

With regards to claim 4, there is a rotary knob located on the top of the column (66).

With regards to claim 5, there is a cam (53), which moves the wheel up and down relative to the frame as the knob is rotated.

With regards to claims 6 and 7, when the wheel is moved downwardly the force of the brush is increased and when the wheel is moved upwardly the force of the brush is decreased.

With regards to claim 21, the sweeper comprises a front housing (11) and a rotating brush (14) secured to the housing. There is a frame (not labeled, see figure 4 and figure 5 wherein the frame is shown by the cross hatched area below the front housing) secured to a lower portion of the housing extending rearward from the central portion of the sweeper. There is a height adjustment column (57) rising from the rear of the frame. There is a dirt receptacle (68) removably located on the frame. There is additionally an adjustable wheel (17) received within the column and movable vertically to adjust the height of the frame wherein the wheel partially supports the frame when the dirt receptacle is removed.

With regards to claim 22, the frame defines a wheel well (internal cavity between frame and front housing) for at least partially receiving the wheel in the adjustable wheel assembly.

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The column attaches to the frame over the wheel well (column is located within the cavity between the frame and the front housing).

With regards to claim 23, the dirt receptacle defines a notch for partially receiving the column. The column is engageable with the notch to orient the dirt receptacle relative to the frame (column 4 shows how the dirt receptacle is notched downward (68) to receive a portion (52) of the column).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Pätzold et al. (USPN 4484371) as evidenced by Pätzold et al. (USPN 4502173) or alternatively under 35 U.S.C. 103(a) as being unpatentable over Pätzold et al. (USPN 4484371) in view of Pätzold et al. (USPN 4502173).

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Pätzold ('371) teaches a sweeper comprising a front housing (11) and a rotating brush (14) secured to the housing having tangentially extending bristles adapted to engage a surface at an oblique angle (every bristle that touches the surface, except for the bristles directly perpendicular to the surface, engage the surface at an oblique angle). There is a frame (not labeled, see figure 5) secured to a lower portion of the housing. There is a height adjustment column (figure 1, round element, not labeled but evidenced by patent number 4502173) rising from the rear of the frame. There is a dirt receptacle (27) removably located on the frame.

With regards to claim 8, there is a latch (35) on the upper portion of the dirt receptacle.

With regards to claim 9, the latch, column and frame cooperate to position the dirt receptacle to the front housing.

With regards to claim 10, the latch moves in a linear path to engage a catch in the housing (40).

For arguendo purposes, if the applicant disagrees with the rejection that Pätzold ('371) teaches a height adjustment column, then the applicant is directed toward the Pätzold ('173) reference. '173 teaches a floor sweeping machine which appears to be essentially the same as '371. '173 however clearly teaches a height adjustment column (56) to adjust the height of the drive wheels (17), the wheel cases (26) and revolving brush (14). '371 shows a round element in figure 4 similar to the round element in figure 3 of '173. The round element of '173 is the height adjustment column. Therefore it would appear that '371's round element is also a height adjustment column however since '371 fails to disclose the structural limitation of this element, it would have been obvious to one of ordinary skill in the art at the time the invention was made

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to modify '371 with the height adjustment mechanism of '173 so that a permanent adjustment of the height of the revolving brush is thereby achieved (col. 1, lines 46-51).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haaga (USPN 5896611).

Haaga ('611) teaches a sweeper comprising a front housing (forward portion of 10) and a first and second rotating brush (15, 16) attached to the housing having tangentially extending bristles adapted to engage a surface at an oblique angle (figure 1 shows the angle of the brush). There is a dirt scoop (20) positioned between the brushes. There is a frame (not labeled, see figure 1) secured to a lower portion of the housing. There is a column (30) rising from the rear of the frame. There is a dirt receptacle (not labeled but shown as 10 on figure 1) removably located on the frame. Haaga ('661) teaches all the essential elements of the claimed invention however fails to teach that the frame which is attached to the lower portion of the front housing is a separate element than the housing. It appears that the frame is integral with the housing, however it is unclear therefore, for arguendo purposes, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the frame and housing so that they are separate elements secured together since making elements separable is a modification that has been considered to be within the level of skill in the art. MPEP 2144.04.

Claims 11-12, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haaga (USPN 5184367).

Haaga ('367) teaches a sweeper comprising a front housing (1) and a first and second rotating brush (3) secured to the housing having tangentially extending bristles adapted to engage a surface at an oblique angle (figure 1 shows the angle of the brush). There is a dirt scoop (col.

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3, lines 20-28) positioned between the brushes. There is a frame (not labeled, see figure 1, best shown near 18) attached to a lower portion of the housing. There is a column (21) rising from the rear of the frame. There is a dirt receptacle (2) removably located on the frame. Haaga ('367) teaches all the essential elements of the claimed invention however fails to teach that the frame which is attached to the lower portion of the front housing is a separate element than the housing. It appears that the frame is integral with the housing, however it is unclear therefore, for arguendo purposes, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the frame and housing so that they are separate elements secured together since making elements separable is a modification that has been considered to be within the level of skill in the art. MPEP 2144.04.

With regards to claim 12, there is a notch defined in the rear of dirt receptacle for extending around the column (17).

With regards to claim 18, there is a latch positioned on the upper portion of the dirt receptacle (7).

With regards to claim 19, the latch, column and frame cooperate to position the dirt receptacle to the front housing.

With regards to claim 20, the latch moves in a linear path to engage a catch located above the scoop (figure 2).

Claims 11, 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haaga (USPN 5184367) in view of Parker et al. (USPN 2268059).

Haaga ('367) teaches all the essential elements of the claimed invention however fails to teach a column with adjustable wheel assembly. Parker teaches a height adjustment column

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(51a) rising from the rear of the frame (claim 11). There is an adjustable wheel assembly (51) positioned within the column (claim 13). There is a rotary knob located on the top of the column (not labeled but shown in figure 3 as reference number 51a) (claim 14). There is a cam (threading on 51a), which moves the wheel up and down relative to the frame as the knob is rotated (claim 15). Moving the wheel downward increases the force of the first and second brush. Moving the wheel upwardly decreases the force of the first and second brush. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Haaga's sweeper with the adjustable wheel of Parker since the adjustable wheel would aids in adjusting the amount of pressure applied to the ground or floor by the brush (page 2, col. 2, lines 6-15). Therefore, the sweeper could be used to clean both rough surface and smooth surfaces and only the height of the wheel would need to be altered.

Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al. (USPN 2268059) in view of Joss et al. (USPN 4644605).

Parker teaches all the essential elements of the claimed invention however fails to teach a latch positioned on the upper portion of the dirt receptacle. Joss teaches a cleaning device comprising a dirt receptacle comprising a latch (45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the dirt receptacle of Parker so that it comprises a latch as taught by Joss so that the dirt receptacle can not be removed until external force is applied to the latch (col. 6, lines 21-28). Additionally, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination

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would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Response to Arguments

Applicant's arguments filed 4/27/07 in the appeal brief have been fully considered but they are not persuasive.

Applicant argues that Gomez's (USPN 2670485) frame does not have a column rising from it. Additionally, applicant argues that the bristles are adapted to engage the surface at a perpendicular angle. The examiner would like to point out that the Gomez does teach a column rising from the rear of the frame. The column may be attached to the dirt receptacle however, it is located above and to the rear of the frame. The claim language does not explicitly state that the column is directly attached to the frame member. The language only suggests that the column be located at a position above and to the rear of the frame. Regarding the angle at which the bristles contact the surface, there are many bristles on the brush that contact the surface at the same time. The only bristles that are going to contact the surface at ninety degrees are the ones that are directly perpendicular to the surface, however, there are multiple bristles located on either side of the perpendicular bristle that contact the surface at an oblique angle.

Applicant argues that Gomez does not teach a notch in the dirt receptacle that extends around the column. However figure 2 shows the column 66 being surrounded by bracket 64. The bracket is considered to be part of the dirt receptacle and therefore, the bracket comprises a notch to receive the column. Additionally, it can be considered that the bracket is located in the rear of the dirt receptacle and the bracket comprises a u-shaped notch, which the column is located within. Applicant also argues that Gomez fails to teach a wheel assembly positioned in

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the column. The examiner would like to point out figure 3, wherein it is shown that the column comprises a lower u-shaped portion which receives the wheel.

With regards to Parker (USPN 2268059), the applicant argues that the bristles are adapted to engage the surface at an oblique angle and the column is not rising from the rear of the frame. As stated above with regards to Gomez, the examiner would like to point out that the Parker does teach a column rising from the rear of the frame. The column may be attached to the rear of the housing however, it is located above and to the rear of the frame. The claim language does not explicitly state that the column is directly attached to the frame member. The language only suggests that the column be located at a position above and to the rear of the frame. Regarding the angle at which the bristles contact the surface, there are many bristles on the brush that contact the surface at the same time. The only bristles that are going to contact the surface at ninety degrees are the ones that are directly perpendicular to the surface, however, there are multiple bristles located on either side of the perpendicular bristle that contact the surface at an oblique angle.

Applicant also argues that Parker fails to teach a wheel assembly positioned in the column. The examiner would like to point out figure 3, wherein it is shown that the column comprises a lower u-shaped portion which receives the wheel. The applicant also argues that Parker fails to disclose a latch. The rejection to Parker was withdrawn and a new rejection was made in view of Joss et al. to show a latch on a trash receptacle. The latch of Joss on Parker's trash receptacle clearly reads on the limitation that the latch, column and frame cooperate to position the dirt receptacle on the front of the housing since the latch opens the area which is to receive the receptacle, the column helps the user to determine the front of the machine versus the

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back for orientation of the receptacle and the frame helps to maintain the position of the receptacle when in place.

With regards to Patzold ('173), the applicant argues that the height adjustment column rises from the front of the frame and not the rear of the frame as claimed. However the front and rear of the frame are both relative terms. There is nothing preventing the frame from being orientated so that the end with the column is the rear and the opposite end is the front. Additionally regarding the argument that Patzold ('173) fails to teach a removable dirt receptacle, it is understood that element 68 could be considered the dirt receptacle since it would clearly accumulate dirt and even though Patzold ('173) fails to state that it is removable, it is known in the art that any element is capable of being removed at least once. The applicant further argues that the column does not at least partially receive the adjustable wheel assembly and that the wheel assembly partially supports the frame when the dirt receptacle is removed. It is noted that the adjustable wheel assembly comprises element 44 which is partially received within the column at element 52 (figure 5). Additionally, when the dirt receptacle is removed, the wheel assembly will continue to support the frame.

With regards to Patzold (USPN 4484371), the reference does not explicitly state what the round element in figure 1 is, however using USPN 4502173 as evidence, it is clear that they are the same machine and that the round element in '371 is the same as the round element in '173. Therefore, the round element in '173 is a height adjustment mechanism and therefore the round element in '371 is also a height adjustment mechanism. Additionally, an alternative rejection was made to show that it is obvious to modify '371 with '173's column to allow for height adjustment of the device.

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With regards to the Haaga (USPN 5896611), the applicant argues that Haaga does not teach column. The examiner would like to point out that the claim language does not limit what type of column is being claimed. The claim language only states that there is a column rising from the rear of the frame. The language does not state the function of the column and therefore, the pushing arm of Haaga is a column that rises from the rear of the frame. Additionally, the applicant argues that Haaga does not disclose a separate frame to which the housing is attached. The claim language does not explicitly state that the frame and the housing need to be separate elements, however the rejection was altered to show that it would have been obvious to make the housing and frame from separate elements.

With regards to Haaga (USPN 5184367), the applicant argues that Haaga fails to teach a column as claimed. The element that the examiner refers to as a column is instead a hook shaped profiling. The examiner would like to point out that a column is a vertical row and so while the element may be a hook shaped element it is also a vertical row and therefore can be considered a column. This column is additionally, rising from the rear of the frame and is not centrally located as stated by the applicant, since the frame only extends to the column. The portion beyond the column is the dirt receptacle and cannot be considered the frame. The claim language does not explicitly state that the frame and the housing need to be separate elements, however the rejection was altered to show that it would have been obvious to make the housing and the frame from separate elements. The applicant also states that Haaga fails to teach a dirt scoop positioned in the upper housing proximate the point at which the bristles of the first brush contact the bristles of the second brush. Column 3, lines 20-28 clearly read on the claimed limitation of a dirt scoop.

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With regards to Haaga ('367) in view of Parker ('059), the applicant argues that Parker fails to teach a column as claimed. The applicant is directed to the examiner's response to Parker above, regarding the limitations of the column and the applicant is directed to the examiner's response to Haaga ('367) above, regarding the dirt scoop.

Conclusion

In view of the appeal brief filed on 4/27/07, PROSECUTION IS HEREBY REOPENED. New grounds of rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L. Karls whose telephone number is 571-272-1268. The examiner can normally be reached on 7:00-4:30 M-Th, alternating F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Shay L Karls
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